

A large, light gray silhouette of a sturgeon is centered on the page. Behind the sturgeon is a faint outline of a globe with latitude and longitude lines. The sturgeon is facing right and has its mouth slightly open.

# **Sturgeon Husbandry**

*At Vancouver Island University<sup>®</sup>*



VANCOUVER ISLAND  
UNIVERSITY

# General Maintenance:

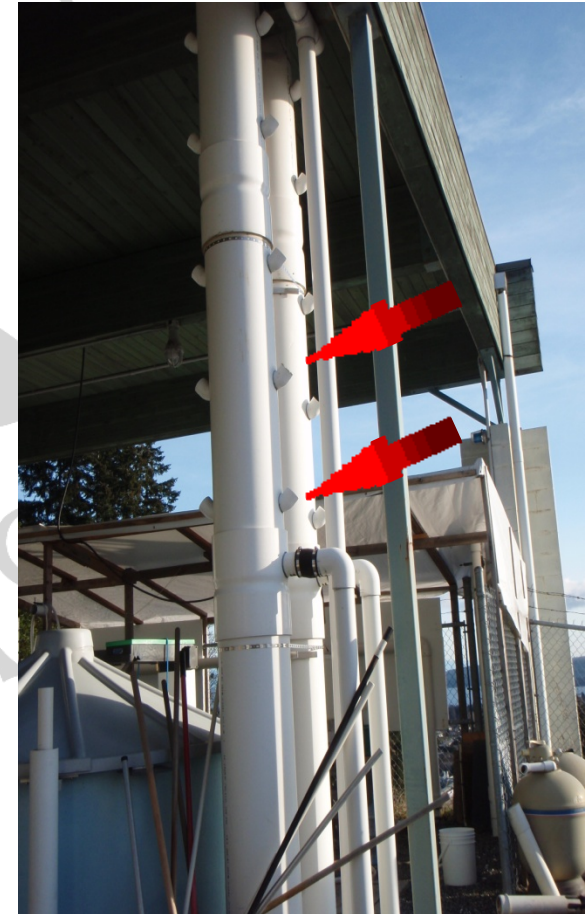
- **Maintenance includes:**
  - Daily cleaning of tanks
  - Cleaning of filters
  - Record and data keeping
  - Water quality
    - Temperature, dissolved oxygen, general water quality

**Keeping the STURGEON ALIVE and HAPPY!!!**

# Water Quality

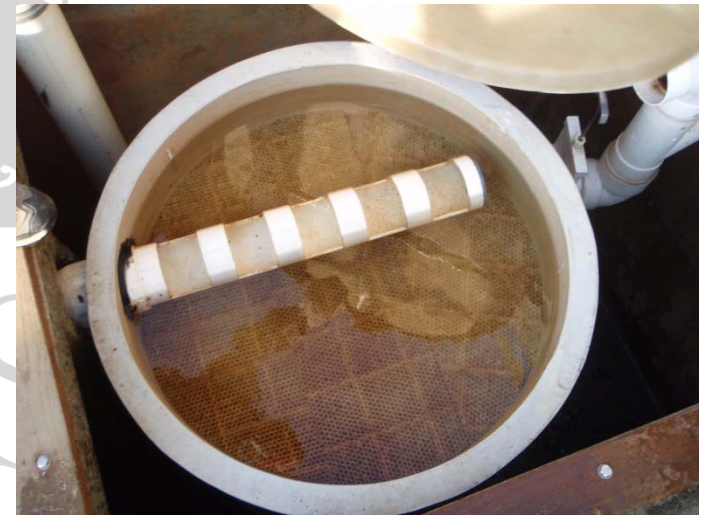
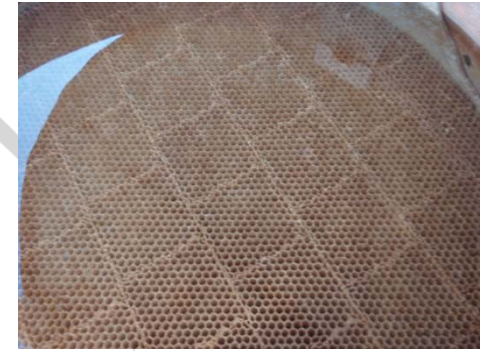
- Good water quality is essential
- Temperature and dissolved oxygen levels are checked daily to ensure that they are in the optimal range
- Chlorinated city water is the primary source of water to the hatchery, requiring the daily addition of sodium sulfite to the system to remove chlorine
- New incoming water is aerated in the aeration tower. Recirculated water in the tanks is aerated with air stones and through trickle filters (pictured right) as it travels through the system

Aeration vents =



# Filter system

- Recirculation:
  - The majority of the water used throughout the hatchery is recirculated
  - In each system, the recirculated water passes through a bio-filter to remove particles (feces, leftover food, etc...), and converts harmful ammonia into nitrate through bacterial action
- Flow Through:
  - Due to the delicate nature of eggs and juvenile sturgeon, they are raised in flow through systems (100% new water) to provide the best water quality possible



# Tank Designs

## ● Tanks:

- The majority of the sturgeon are in round, fiberglass tanks
- They are easy to clean and access
- Water inflow is regulated by a valve at the top of the tank and discharged through a screen in the bottom
- After incubation, juvenile sturgeon are raised in a tank insert called a feed tray
- When large enough, they are transferred from the feed tray to a full size tank



# Incubation

- Eggs are fertilized and put into McDonald jar incubators (see photo)
- In these jars, water enters the bottom, creating an upwelling action causing the eggs to continually move
- As the eggs hatch (6-10 days @ 15°C), the water carries the larvae out of the incubators and into a collection tank
- Each day, larvae are collected and moved to the early rearing tanks



# Early Rearing

- Early rearing tanks are cleaned daily
  - Screens must always be kept clean of excess food and feces
  - Sides are scrubbed with a brush
  - All excess food and feces left in the bottom of the tank must be siphoned
- When dealing with young sturgeon it is important to keep their environment as clean as possible
  - Equipment for cleaning is specific for each tank and is used nowhere else
- Temperature and dissolved oxygen (DO) are checked daily to ensure they are at the correct levels

